



October 30 to November 5, 2011 (Week 44)

Overall Influenza Summary

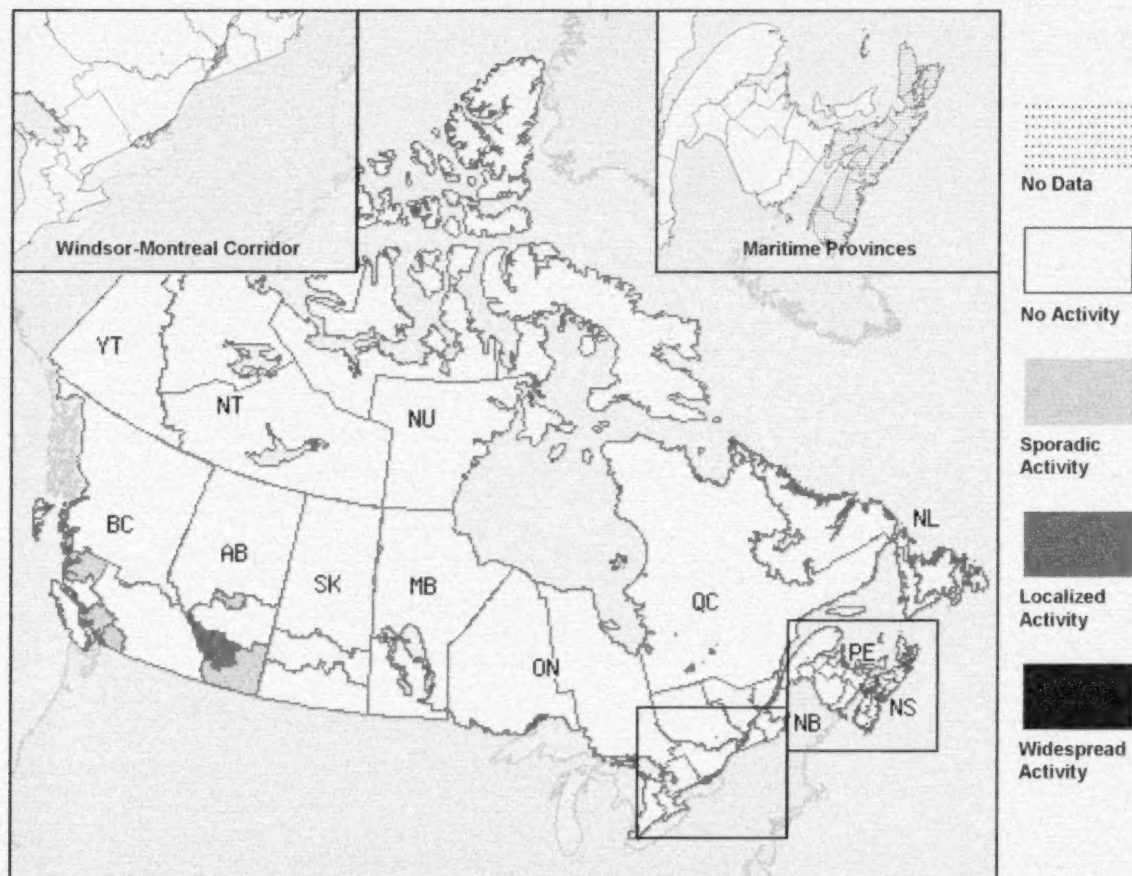
- Influenza activity is increasing in some regions (AB, BC & QC) but remains low in the rest of the country
- One region (in Calgary, AB) reported localized influenza activity; five regions reported sporadic influenza activity (in BC, AB & QC)
- In week 44, 8 laboratory detections of influenza were reported (7 A/H3 and 1 B)
- One laboratory-confirmed influenza outbreak (due to A/H3 virus) was reported in a seniors lodge
- Two influenza-associated paediatric hospitalizations were reported from BC
- The national ILI consultation rate remains low

Influenza Activity and Outbreaks

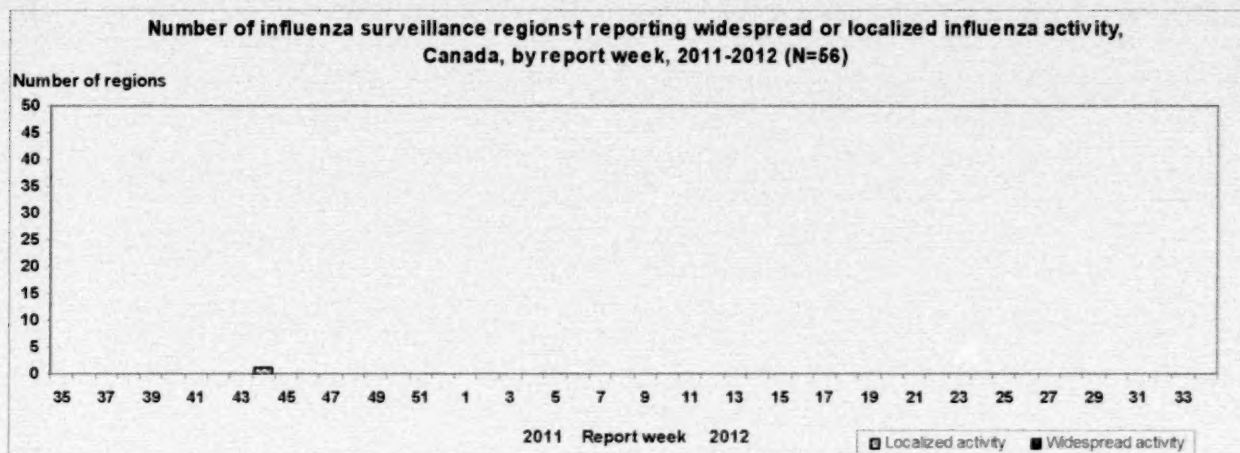
In week 44, one surveillance region (Calgary, AB) reported localized influenza activity and five surveillance regions within provinces (in BC, AB and QC) reported sporadic influenza activity. No data was received from regions in Nova Scotia this week (see Activity level Map).

One laboratory-confirmed influenza outbreak (due to influenza A/H3 virus) was reported in a seniors lodge in Calgary, AB in week 44. It is the first outbreak due to influenza reported this season.

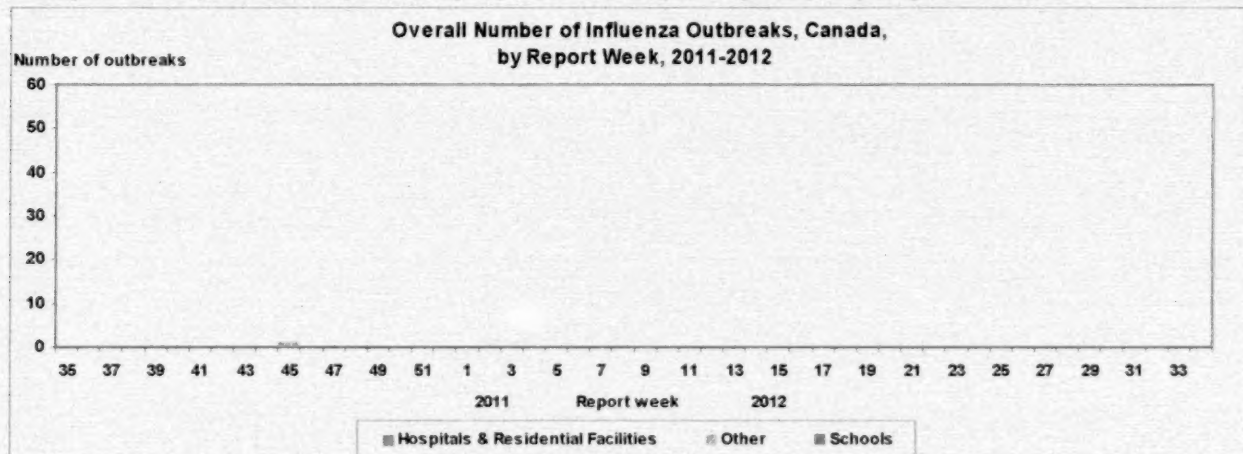
Map of overall Influenza activity level by province and territory, Canada, Week 44



Note: Influenza activity levels, as represented on this map, are assigned and reported by Provincial and Territorial Ministries of Health, based on laboratory confirmations, sentinel ILI rates (see graphs and tables) and reported outbreaks. Please refer to detailed definitions on the last page. For areas where no data is reported, late reports from these provinces and territories will appear on the FluWatch website.

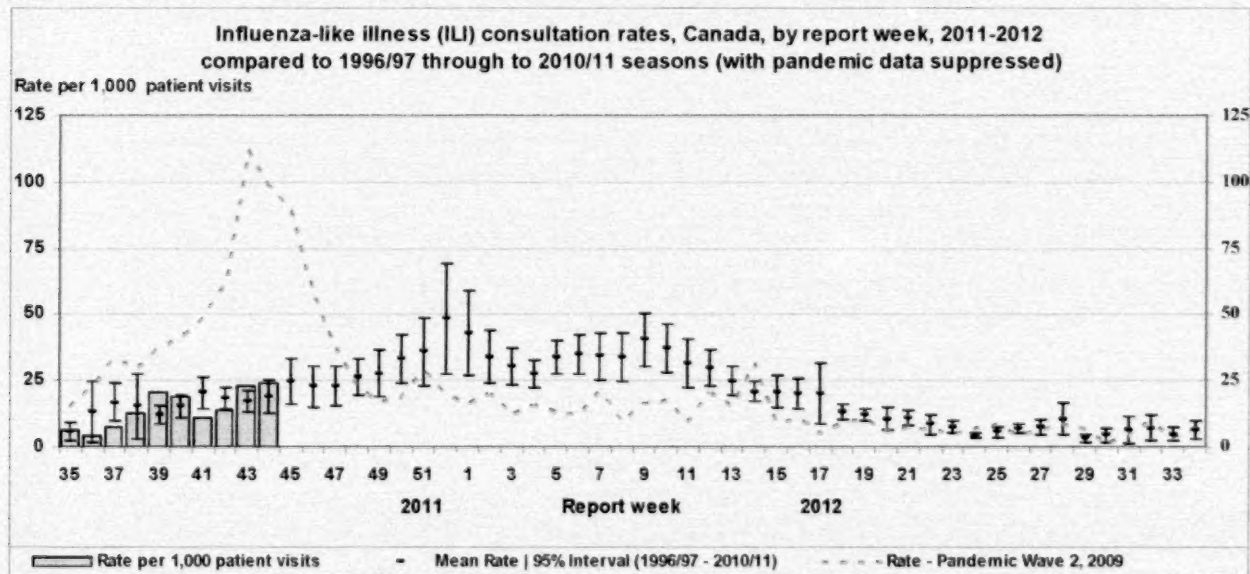


† sub-regions within the province or territory as defined by the provincial/territorial epidemiologist. Graph may change as late returns come in.



ILI consultation rate

The national ILI consultation rate increased slightly to 24.1 consultations per 1,000 patient visits in week 44 which is within the expected levels for this time of year (see ILI graph). The highest consultation rate this week was observed among those 5 to 19 years of age (35.9 / 1,000 visits) followed by children under 5 (27.6/1,000 visits).



Note: No data available for mean rate in previous years for weeks 19 to 39 (1996-1997 through 2002-2003 seasons). Delays in the reporting of data may cause data to change retrospectively.

Laboratory Surveillance Summary

In week 44, 1,788 influenza tests were conducted of which 8 (0.4%) were positive for influenza. Of the positive detections, there were seven (87.5% or 7/8) A(H3) viruses (from BC, AB & ON) and one (12.5% or 1/8) B virus (from QC). Although the proportion of tests positive for influenza increased slightly this week compared to previous weeks, the proportion is still low and has remained below 0.4% since the beginning of this season. The proportion of influenza virus detections by type/subtype this season to date is as follows: 77.5% influenza A (58% - A(H3); 6.5% - A(H1N1)pdm09; 35.5% - untyped) and 22.5% influenza B.

In week 44, the proportion of tests positive for rhinoviruses (15.8%) continued to decline while the proportion of parainfluenza virus detections increased (7.3%). The proportion of positive tests for the other respiratory viruses remained low (RSV-2.1%; adenovirus-3.2%; hMPV-1.3%; coronavirus-0.5%) (see Respiratory Viruses graph). For more details of weekly respiratory virus detections in Canada, see <http://www.phac-aspc.gc.ca/bid-bmi/dsd-dsm/rvdi-divr/index-eng.php>.

Weekly & Cumulative numbers of positive influenza specimens by Provincial Laboratories, Canada, 2011-2012

Reporting provinces	October 30 to November 5, 2011)						Cumulative (August 28, 2011 to November 5, 2011)					
	Influenza A					B	Influenza A					B
	A Total	A(H1)	A(H3)	Pand H1N1	A (UnS)*	Total	A Total	A(H1)	A(H3)	Pand H1N1	A (UnS)*	Total
BC	1	0	1	0	0	0	11	0	11	0	0	2
AB	5	0	5	0	0	0	7	0	5	1	1	1
SK	0	0	0	0	0	0	0	0	0	0	0	0
MB	0	0	0	0	0	0	0	0	0	0	0	0
ON	1	0	1	0	0	0	2	0	2	0	0	0
QC	0	0	0	0	0	1	11	0	0	1	10	6
NB	0	0	0	0	0	0	0	0	0	0	0	0
NS	0	0	0	0	0	0	0	0	0	0	0	0
PE	0	0	0	0	0	0	0	0	0	0	0	0
NL	0	0	0	0	0	0	0	0	0	0	0	0
Canada	7	0	7	0	0	1	31	0	18	2	11	9

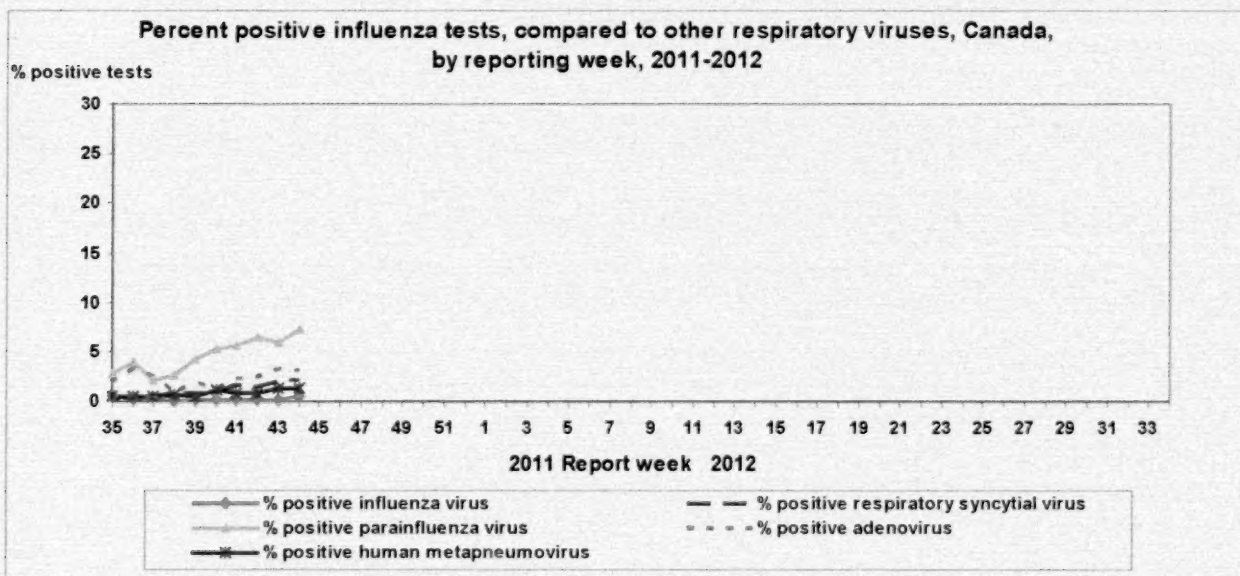
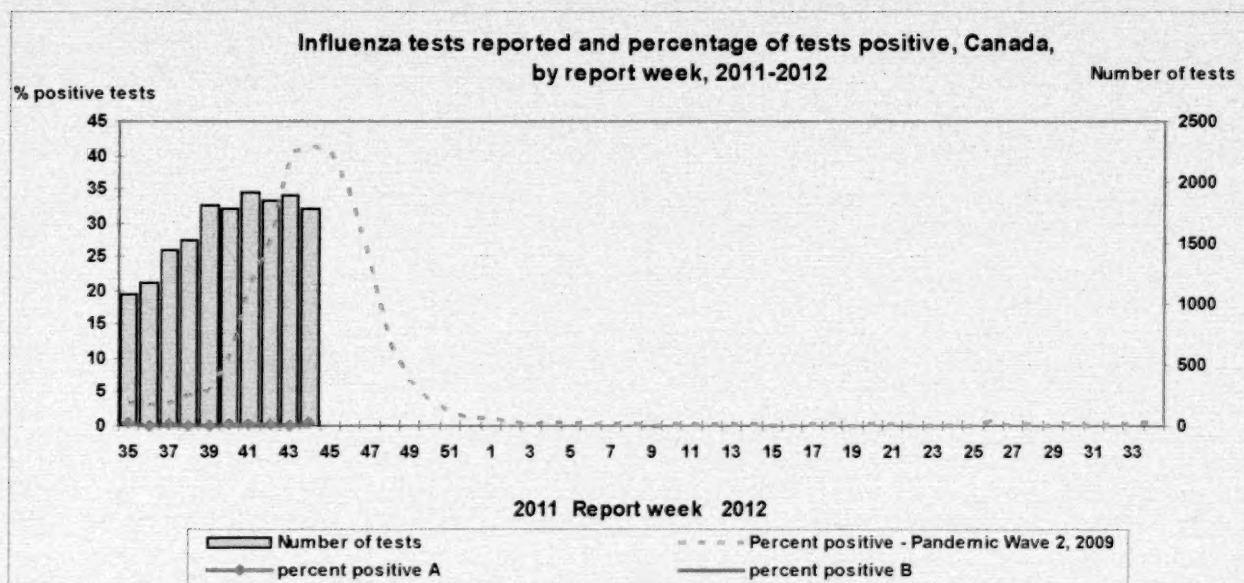
*Unsubtyped: The specimen was typed as influenza A, but no test for subtyping was performed. Specimens from NT, YT, and NU are sent to reference laboratories in other provinces. Note: Cumulative data includes updates to previous weeks; due to reporting delays, the sum of weekly report totals do not add up to cumulative totals.

Weekly & Cumulative numbers of positive influenza specimens by age groups reported through case-based laboratory reporting, Canada, 2011-2012*

Age groups	Weekly (Oct. 30 to Nov. 5, 2011)					Cumulative (Aug. 28, 2011 to Nov. 5, 2011)				
	Influenza A				B	Influenza A				B
	A Total	Pandemic H1N1	A/H3N2	A untyped	Total	A Total	Pandemic H1N1	A/H3N2	A untyped	Total
<5	2	0	2	0	0	2	0	2	0	0
5-19	0	0	0	0	0	0	0	0	0	0
20-44	0	0	0	0	0	3	1	1	1	1
45-64	0	0	0	0	0	0	0	0	0	0
65+	2	0	2	0	0	2	0	2	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
Total	4	0	4	0	0	7	1	5	1	1

*Please note that this table reflects the number of specimens for which demographic information was reported. These represent a subset of all positive influenza cases reported. Delays in the reporting of data may cause data to change retrospectively.

Detailed information on age and subtype were received on eight cases this season to date. The proportions of cases by age group are as follows: 25.0% were < 5 years; 50.0% were between 20-44 years of age; and 25.0% were ≥ 65 years.



Antigenic Characterization

Since the start of the season, the National Microbiology Laboratory (NML) has antigenically characterized six influenza viruses (three A/H3N2 and three B). All three A/H3N2 viruses (from BC) are antigenically related to A/Perth/16/2009, which is the influenza A/H3N2 component recommended for the 2011-12 Northern Hemisphere influenza vaccine. One of the influenza B viruses characterized is antigenically related to the vaccine strain B/Brisbane/60/2008 (Victoria lineage) (from AB). The other two influenza B viruses (from BC) are antigenically related to the reference virus B/Wisconsin/01/2010-like, which belongs to the Yamagata lineage.

Antiviral Resistance

Since the beginning of the season, NML has tested six influenza viruses (three A/H3N2 and three B) for resistance to oseltamivir (by phenotypic assay and/or sequencing) and for resistance to zanamivir (by phenotypic assay) and it was found that all six viruses were susceptible to oseltamivir and zanamivir. The A/H3N2 virus tested for amantadine resistance was found to be resistant.

Severe Illness Surveillance

Paediatric Influenza Hospitalizations and Deaths

In week 44, two new laboratory-confirmed influenza-associated paediatric (16 years of age and under) hospitalizations were reported through the Immunization Monitoring Program Active (IMPACT) network. Both cases were from BC and due to influenza A (unsubtyped). One case was between the ages of 2-4 and the other

between 5-9 years. These two cases are the first influenza-associated paediatric hospitalizations reported since the start of the season.

International influenza update

No new influenza updates were reported by the WHO since November 4, 2011. Previous updates are available at: http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

PAHO: In week 43, influenza activity remained low in North America. In Central America and the Caribbean, the predominance of RSV continued in several countries, including circulation of influenza A(H1N1)pdm09 and influenza A/H3N2. In the Southern Cone, influenza activity remained low with low circulation of influenza A(H1N1)pdm09, influenza A/H3 and influenza B having been reported.

http://new.paho.org/hq/index.php?option=com_content&task=view&id=3352&Itemid=2469&to=2246

United States: In week 44, the CDC reported that 0.6% (11/1,833) of influenza tests were positive. Since October 1, 2011, the CDC characterized 12 influenza viruses: 11 A/H3N2 and 1 B. All 11 influenza A/H3N2 viruses were A/Perth/16/2009-like. The influenza B virus was characterized as B/Brisbane/60/2008-like. National and regional proportions of visits due to ILI were below baseline levels. One state (Virginia) reported local geographic spread of influenza while the rest reported sporadic or no activity.

<http://www.cdc.gov/flu/weekly/index.htm>

Europe: In week 44, levels of influenza activity in Europe remained low. Of the 40 countries reporting on geographical distribution of influenza activity, 5 countries reported sporadic spread. Nine of the 544 (1.7%) specimens tested were positive for influenza virus: 8 influenza A viruses and 1 influenza B virus. All countries reported low intensity of influenza activity and low impact on their health care services. No antigenic or genetic characterizations were reported this week; however, there have been sporadic detections of influenza A(H3N2), A(H1N1)pdm09 and influenza B reported in recent weeks. http://euroflu.org/cqi-files/bulletin_v2.cqi

FluWatch reports include data and information from the following sources: laboratory reports of positive influenza tests in Canada (National Microbiology Laboratory), sentinel physician reporting of influenza-like illness (ILI), provincial/territorial assessment of influenza activity based on various indicators, including laboratory surveillance, ILI reporting, and outbreaks, influenza-associated paediatric and adult hospitalizations, antiviral sales in Canada, and WHO and other international reports of influenza activity.

Abbreviations: Newfoundland/Labrador (NL), Prince Edward Island (PE), New Brunswick (NB), Nova Scotia (NS), Quebec (QC), Ontario (ON), Manitoba (MB), Saskatchewan (SK), Alberta (AB), British Columbia (BC), Yukon (YT), Northwest Territories (NT), Nunavut (NU).

ILI definition for the 2011-2012 season

ILI in the general population: Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which is likely due to influenza. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

Definitions of ILI/Influenza outbreaks for the 2011-2012 season

Schools: Greater than 10% absenteeism (or absenteeism that is higher (e.g. >5-10%) than expected level as determined by school or public health authority) which is likely due to ILI. Note: it is recommended that ILI school outbreaks be laboratory confirmed at the beginning of influenza season as it may be the first indication of community transmission in an area.

Hospitals and residential institutions: two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case. Institutional outbreaks should be reported within 24 hours of identification. Residential institutions include but not limited to long-term care facilities (LTCF) and prisons.

Other settings: two or more cases of ILI within a seven-day period, including at least one laboratory confirmed case; i.e. workplace, closed communities.

Influenza Activity Levels Definition for the 2011-2012 season

Influenza Regional Activity levels are defined as:

- 1 = No activity: no laboratory-confirmed influenza detections in the reporting week, however, sporadically occurring ILI may be reported
- 2 = Sporadic: sporadically occurring ILI and lab confirmed influenza detection(s) with **no outbreaks** detected within the influenza surveillance region†
- 3 = Localized: (1) evidence of increased ILI* and
(2) lab confirmed influenza detection(s) together with
(3) **outbreaks** in schools, hospitals, residential institutions and/or other types of facilities occurring in **less than 50% of the influenza surveillance region†**
- 4 = Widespread: (1) evidence of increased ILI* and
(2) lab confirmed influenza detection(s) together with
(3) **outbreaks** in schools, hospitals, residential institutions and/or other types of facilities occurring in **greater than or equal to 50% of the influenza surveillance region†**

Note: ILI data may be reported through sentinel physicians, emergency room visits or health line telephone calls.

* More than just sporadic as determined by the provincial/territorial epidemiologist.

† Influenza surveillance regions within the province or territory as defined by the provincial/territorial epidemiologist.

We would like to thank all the Fluwatch surveillance partners who are participating in this year's influenza surveillance program.

This report is available on the Public Health Agency website at the following address: <http://www.phac-aspc.gc.ca/fluwatch/index.html>. Ce rapport est disponible dans les deux langues officielles. Pour en recevoir un exemplaire dans l'autre langue chaque semaine, veuillez communiquer avec Estelle Arseneault, Division de l'immunisation et des infections respiratoires au (613) 998-8862.